

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Frank Holland

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS SEED OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS PROVIDED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

POPCORN

'Big Red'

In Testimony Whereof, I have hereunto set
my hand and caused the seal of the Plant
Variety Protection Office to be affixed
at the City of Washington, D.C.
this 30th day of December in
the year of our Lord one thousand nine
hundred and eighty-two

Attest:

Kenneth A. Evans
Acting
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

John R. Block
Secretary of Agriculture



UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

FORM APPROVED
OMB NO. 40-R3822

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY (FH-1)		1b. VARIETY NAME BIG RED		FOR OFFICIAL USE ONLY PV NUMBER 8200076	
2. KIND NAME Popcorn		3. GENUS AND SPECIES NAME Zea Mays		FILING DATE 3/4/82	TIME 3:00 A.M. P.M.
4. FAMILY NAME (BOTANICAL)		5. DATE OF DETERMINATION Sept. 1979		FEE RECEIVED \$ 500.00 \$ 250.00	DATE 3/4/82 12/10/82
6. NAME OF APPLICANT(S) Frank Holland		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 2615 Old Logan Rd. Rt#8 Lancaster, Ohio 43130		8. TELEPHONE AREA CODE AND NUMBER 614 654 0455	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.)			10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION		11. DATE OF INCORPORATION
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS:					

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☒ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☒ YES ☐ NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☒ YES ☐ NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? ☒ FOUNDATION ☐ REGISTERED ☒ CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☒ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

Jan. 5, 1982

(DATE)

Frank W. Holland
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

POPCORN

8200076

BIG RED

13A Exhibit A

Strawberry popcorn was the initial parent. It was planted adjacent to open pollinated yellow popcorn. Selected red grains from one yellow ear. Kernels were planted individually but allowed to cross pollinate. All red ear selections were planted and cross pollination allowed. One year used detassel method of male - female. Then corn was planted with no record male - female. In 1979 crop was all red with good size. Continued planting 1980 and 1981 and crop continued all red with nice size.

Now appears stable as to color.

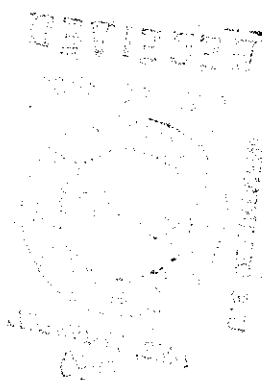
POPCORN

BIG RED

13A Exhibit A

Strawberry popcorn was the initial parent. It was planted adjacent to open pollinated yellow popcorn. Selected red grains from one yellow ear. Kernels were planted individually but allowed to cross pollinate. All red ear selections were planted and cross pollination allowed. One year used detassel method of male - female. Then corn was planted with no record male - female. In 1979 crop was all red with good size. Continued planting 1980 and 1981 and crop continued all red with nice size. Corn has been stable both as to color and all varietal characters for these three generations.

There are variants that occur, these are smaller stalks with smaller cobs. They occur about 1 or 2 per 50 plants or between 2 to 4 per-cent.



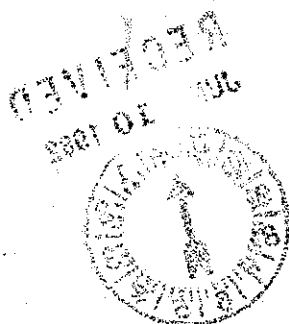
13 B. Exhibit B.

Novelty Statement

Big Red is most similar to South American Giant Popcorn.

Big Red is similar in size of grain to South American Giant yellow popcorn. While the yellow is approximately 2 feet shorter in height of stalk its leaf structure and color are similar to Big Red. It has a strong 2 ear tendency like Big Red but the ears are 3 to 4 inches longer. The yellow is superior in popping size also having less hull when popped. Their growing seasons are almost identical from sprout to maturity.

Big Red does however have a red pericap while the South American Giant Yellow has a yellow pericap.



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
BELTSVILLE, MARYLAND 20705

FORM APPROVED: OMB NO. 40-R3822

EXHIBIT C
(Corn)

OBJECTIVE DESCRIPTION OF VARIETY
CORN (ZEA MAYS)

NAME OF APPLICANT(S) Frank Holland	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 2615 Old Logan Rd, Rt#8 Lancaster, Ohio 43130	PVPO NUMBER 8200076
	VARIETY NAME OR TEMPORARY DESIGNATION Big Red

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. **089** or **09**) when number is either 99 or less or 9 or less.

1. TYPE:

5

1 = SWEET 2 = DENT 3 = FLINT 4 = FLOUR 5 = POP 6 = ORNAMENTAL

2. REGION WHERE BEST ADAPTED IN THE U.S.A.:

7

1 = NORTHWEST 2 = NORTHCENTRAL 3 = NORTHEAST 4 = SOUTHEAST
5 = SOUTHCENTRAL 6 = SOUTHWEST 7 = MOST REGIONS

3. MATURITY (In Region of Best Adaptability):

(Under "comments" (pg. 3) state how heat units were calculated)

43

DAYS FROM EMERGENCE TO 50% OF PLANTS IN SILK

0945

HEAT UNITS

72

DAYS FROM 50% SILK TO OPTIMUM EDIBLE QUALITY

1290

HEAT UNITS

31

DAYS FROM 50% SILK TO HARVEST AT 25% KERNEL MOISTURE

0257

HEAT UNITS

4. PLANT:

1508

287 R/S 4/21/82
CM. HEIGHT (To tassel tip)

804

137
CM. EAR HEIGHT (To base of top ear)

10

CM. LENGTH OF TOP EAR INTERNODE

Number of Tillers:

2

1 = NONE 2 = 1-2 3 = 2-3 4 = > 3

Number of Ears Per Stalk:

3

1 = SINGLE 2 = SLIGHT TWO-EAR TENDENCY
3 = STRONG TWO-EAR TENDENCY 4 = THREE-EAR TENDENCY

Cytoplasm Type:

1

1 = NORMAL 2 = "T" 3 = "S" 4 = "C" 5 = OTHER (Specify)

5. LEAF (Field Corn Inbred Examples Given):

Color:

3

1 = LIGHT GREEN (HY) 2 = MEDIUM GREEN (WF9) 3 = DARK GREEN (B14) 4 = VERY DARK GREEN (K166)

Angle from Stalk (Upper half):

2

1 = < 30° 2 = 30-60° 3 = > 60°

Sheath Pubescence:

2

1 = LIGHT (W22) 2 = MEDIUM (WF9)
3 = HEAVY (OH26)

Marginal Waves:

2

1 = NONE (HY) 2 = FEW (WF9) 3 = MANY (OH7L)

Longitudinal Creases:

3

1 = ABSENT (OH51) 2 = FEW (OH56A)
3 = MANY (PA11)

Width:

11

CM. WIDEST POINT OF EAR NODE LEAF

Length:

111

CM. EAR NODE LEAF

11

NUMBER OF LEAVES PER MATURE PLANT

6. TASSEL:

08

NUMBER OF LATERAL BRANCHES

Branch Angle from Central Spike:

3

1 = < 30°

2 = 30-40°

3 = > 45°

Penduncle Length:

07

CM. FROM TOP LEAF TO BASAL BRANCHES

Pollen Shed:

2

1 = LIGHT (WF9)

2 = MEDIUM

3 = HEAVY (KY21)

1

Anther Color:

1 = YELLOW

2 = PINK

3 = RED

4 = PURPLE

5 = GREEN

1

Glume Color:

6 = OTHER (Specify)

Pollen Restoration for Cytoplasm (0 = Not Tested, 1 = Partial, 2 = Good)

0

"T"

0

"S"

0

"C"

OTHER (Specify Cytoplasm and degrees of restoration)

7. EAR (Husked Ear Data Except When Stated Otherwise):

20

CM LENGTH

42

MM. MID-POINT
DIAMETER

162

GM. WEIGHT

Kernel Rows:

2

1 = INDISTINCT

2 = DISTINCT

20

NUMBER

2

1 = STRAIGHT

2 = SLIGHTLY CURVED

3 = SPIRAL

Silk Color (Exposed at Silking Stage):

4

1 = GREEN

2 = PINK

3 = SALMON

4 = RED

Husk Color:

1

FRESH

1 = LIGHT GREEN

2 = DARK GREEN

3 = PINK

6

DRY

4 = RED

5 = PURPLE

6 = BUFF

Husk Extention: (Harvest Stage)

2

1 = SHORT (Ears Exposed) 2 = MEDIUM (Barely Covering Ear)

3 = LONG (8-10CM Beyond Ear Tip)

4 = VERY LONG (> 10 CM)

Husk Leaf:

3

1 = SHORT (< 8 CM)

2 = MEDIUM (8-15 CM)

3 = LONG (> 15 CM)

Shank:

07

CM LONG

4

NO. OF INTERNODES

Position at Dry Husk Stage:

1

1 = UPRIGHT

2 = HORIZONTAL

3 = PENDENT

Taper:

1

1 = SLIGHT

2 = AVERAGE

3 = EXTREME

Drying Time (Unhusked Ear):

2

1 = SLOW

2 = AVERAGE

3 = FAST

8. KERNEL (Dried):

Size (From Ear Mid-Point):

11

MM LONG

06

MM. WIDE

05

MM. THICK

Shape Grade (% Rounds)

5

1 = < 20

2 = 20-40

3 = 40-60

4 = 60-80

5 = > 80

6

8. KERNEL (Dried) :

7 Pericarp Color: 1 = COLORLESS 2 = RED-WHITE CROWN 3 = TAN 4 = BRONZE
 5 = BROWN 6 = LIGHT RED 7 = CHERRY RED
 8 = VARIEGATED (Describe) _____

1 Aleurone Color: 1 = HOMOZYGOUS 2 = SEGREGATING (Describe) _____

1 1 = WHITE 2 = PINK 3 = TAN 4 = BROWN 5 = BRONZE 6 = RED
 7 = PURPLE 8 = PALE PURPLE 9 = VARIEGATED (Describe) _____

1 Endosperm Color: 1 = WHITE 2 = PALE YELLOW 3 = YELLOW 4 = PINK-ORANGE 5 = WHITE CAP.

Endosperm Type:

☐ 1 = SWEET (su1) 2 = EXTRA SWEET (sh2) 3 = NORMAL STARCH 4 = HIGH AMYLOSE STARCH
 5 = WAXY STARCH 6 = HIGH PROTEIN 7 = HIGH LYSINE 8 = OTHER (Specify) _____

1 8 GM. WEIGHT /100 SEEDS (Unsize Sample)

9. COB:

3 1 MM. DIAMETER AT MID-POINT

Strength: **2** 1 = WEAK 2 = STRONG

Color: **2** 1 = WHITE 2 = PINK 3 = RED 4 = BROWN
 5 = VARIEGATED 6 OTHER (Specify) _____

10. DISEASE RESISTANCE (0 = Not Tested, 1 = Susceptible, 2 = Resistant):

<input type="checkbox"/> STALK ROT (Diplodia)	<input type="checkbox"/> STALK ROT (Fusarium)	<input type="checkbox"/> STALK ROT (Gibberella)
<input type="checkbox"/> NORTHERN LEAF BLIGHT	<input type="checkbox"/> SOUTHERN LEAF BLIGHT	<input type="checkbox"/> SMUT
<input type="checkbox"/> SOUTHERN RUST	<input type="checkbox"/> CORN SMUT	<input type="checkbox"/> BACTERIAL WILT
<input type="checkbox"/> BACTERIAL LEAF BLIGHT	<input type="checkbox"/> MAIZE DWARF MOSAIC	<input type="checkbox"/> STUNT
<input type="checkbox"/> OTHER (Specify) _____		

I would guess is resistant to Ohio diseases.

11. INSECT RESISTANT (0 = Not Tested, 1 = Susceptible, 2 = Resistant):

<input type="checkbox"/> CORNBORER	<input type="checkbox"/> EARWORM	<input type="checkbox"/> SAPBEETLE	<input type="checkbox"/> APHID
<input type="checkbox"/> ROOTWORM (Northern)	<input type="checkbox"/> ROOTWORM (Western)		
<input type="checkbox"/> ROOTWORM (Southern)	<input type="checkbox"/> OTHER (Specify) _____		

12. VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN:

CHARACTER	VARIETY	CHARACTER	VARIETY
Maturity		Kernel Type	
Plant Type		Quality (Edible)	
Ear Type		Usage	

REFERENCES:

- U.S. Department Agriculture. Yearbook 1937.
- Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous Authors)
- Emerson, R.A., G.W. Beadle, and A.C. Fraser. A Summary of Linkage Studies in Maize. Cornell A.E.S., Mem. 180. 1935.
- The Mutants of Maize. 1968. Crop Science Society of America. Madison, Wisconsin.
- Stringfield, G.H. Maize Inbred Lines of Ohio. Ohio A.E.S. Bul. 831. 1959.
- Butler, D.R. 1954 - A System for the Classification of Corn Inbred Lines - PhD. Thesis, Ohio State University.

COMMENTS: I got heat units from crop reporting service 202 North high street Columbus, Ohio. Variety most resembles is yellow popcorn in size and Red Strawberry in color.

13D. Exhibit D

Additional description of Big Red

Stalk is taller and has more stockiness than the yellow. Tassel seems to tower above the stalk more than the yellow. Is a good number of 2 eared stalks. Basically the main difference is that the ears are red with good size.

Corn pops with a white color but has a red hull. Hull is more predominate than in yellow and taste is a little different.